

POLAND/Physical Chemistry - Surface Phenomena, Adsorption,  
Chromatography, Ion Exchange.

B.

Abs Jour : Ref Zhur - Khimiya, No 14, 1958, 46139

adsorption of the air itself and considerably less in  
the A of  $CS_2$ . The presence of air does not influence  
the A degree of  $CS_2$ , because the apparent change in the  
adsorption properties of carbon are caused by the de-  
sorption of air.

Card 2/2

POLAND / Chemical Technology, Chemical Products and  
Their Application, Part 4. - Artificial and  
Synthetic Fibers. H

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 63031.

Author : ~~Mieczyslaw Wronski~~

Inst : Lodz University.

Title : Complete Analysis of Viscose.

Orig Pub: Zesz. nauk, Univ. odzk., 1957, Ser. 2, No 3,  
159 - 165.

Abstract: Cellulose xanthogenate (I) is deposited from  
viscose with saturated NaCl solution.  $\text{Na}_2\text{CS}_3$   
and  $\text{Na}_2\text{CS}_4$  are determined photometrically in  
the filtrate.  $\text{Na}_2\text{S}$  and  $\text{Na}_2\text{S}_2\text{O}_3$  are determined  
by direct iodometric titration, NaOH and  $\text{Na}_2\text{CO}_3$   
are determined acidimetrically. The con-  
centration of I is found from the difference

Card 1/X2

POLAND / Chemical Technology, Chemical Products and  
Their Application, Part 4. - Artificial and  
Synthetic Fibers.

H

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 63031.

Abstract: between the iodine amounts consumed by the  
titration of the initial viscose and of the  
filtrate. The complete analysis takes 20  
min. or less.

Card 2/2

43

POLAND/Physical Chemistry. Surface Phenomena, Adsorption.  
Chromatography, Ion Exchange.

D

Abs Jour: Ref Zhur-Khim., No 15, 1958, 49752.

Author : ~~Wronski, Mieczyslaw.~~

Inst : ~~Lodz University.~~

Title : Sorption of Carbon Disulfide by Alkali Cellulose.

Orig Pub: Zesz. nauk. Uniw. lodzk., 1957, Ser. 2, No 3, 167-170.

Abstract: Study of temperature dependence of the adsorption of  
CS<sub>2</sub> vapor by alkali cellulose. CS<sub>2</sub> adsorption curves  
show a minimum at a temperature of about 14° which  
indicates chemical and physical adsorption. --  
Author's summary.

Card : 1/1

WRONSKI, MIECZYSLAW

H.

POLAND/Artificial and Synthetic Fibers.

Abs Jour : Ref Zhur - Khimiya, No 19, 1958, 66205

Author : Wronski Mieczyslaw

Inst :

Title : An Investigation of the Penetration of a Precipitating Bath Through Layers of Viscose.

Orig Pub : Zesz. nauk. Univ. lodzk., 1957, Ser. 2, No 3, 171-175.

Abstract : By means of a glass electrode, the rate of penetration of a precipitating bath through layers of viscose was investigated. The derived pH-time experimental graph of the contact of a viscose layer, found on the electrode, with the precipitating bath, possess three small curves. The first corresponds to the neutralization of NaOH and the formation of  $\text{Na}_2\text{SO}_4$  and  $\text{Na}_2\text{CO}_3$ ; the second, to the decomposition of these salts; the third, to the decrease of the concentration of hydrogen ions. Proceeding from the assumption that through the layer formed of

Card 1/2

47

POLAND/Physical Chemistry. Kinetics. Combustion. Explosions.  
Topochemistry. Catalysis.

B

Abs Jour: Ref Zhur-Khim., No 15, 1958, 49623.

Author : Wronski, Mieczyslaw.

Inst : Lodz University.

Title : Kinetics of Decomposition of Sodium Ethyl Xanthogenate  
in Caustic Alkali.

Orig Pub: Zesz. nauk. Uniw. lodzk., 1957, Ser. 2, No 3, 177-185.

Abstract: Determination of the correlation between rate of  
decomposition of  $C_2H_5OCSSNa$ , with formation of  
 $Na_2S$  and  $Na_2CS$ , and concentration of caustic  
alkali, temperature, and the presence of  $Na_2S$ .  
Decomposition of xanthogenate occurs according to  
two distinct schemes:  $ROSS^- = RO^- + CS_2$  and  $ROCSS^- +$

Card : 1/2

POLAND/Physical Chemistry. Kinetics. Combustion. Explosions.  
Topochemistry. Catalysis.

D

Abs Jour: Ref Zhur-Khin., No 15, 1958, 49623.

$\text{OH}^- = \text{ROH} + \text{CS}_2\text{O}^{2-}$ . Rate of decomposition of xantho-  
genate is defined by the equation:  $-\text{dx}/\text{dt} = k_1x +$   
 $k_2x(\text{NaOH})^2$ . -- Author's summary.

Card : 2/2

26

POLAND / Analytical Chemistry. Analysis of Organic Substances.

E-3

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 1029.

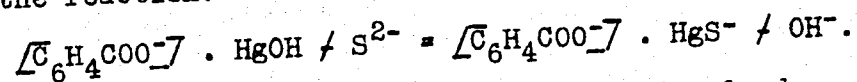
Author : Wronski, M. *UNIV. Lódz, POLAND*

Inst : ~~Not given.~~

Title : The Titration of Sulfides With o-Hydroxy Mercurobenzoic Acid.

Orig Pub: Chem analit., 1957, 2, No 4, 385-386.

Abstract: The titrimetric method for the determination of  $S^{2-}$ , in the presence of  $SO_3^{2-}$ ,  $S_2O_3^{2-}$  and xanthogenates is described, the method being based on the reaction:



From 0.1 to 0.5 millimoles of  $Na_2S$  is dissolved

Card 1/3



POLAND / Analytical Chemistry. Analysis of Organic Substances.

E-3

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 1029.

Abstract: in 150 millimeters of water from which oxygen has been removed previously by the addition of  $\text{Na}_2\text{SO}_3$ , then 5 milliliters of 0.5 N NaOH is added followed by a few drops of 0.1% sodium nitroprusside solution, and the mixture is titrated with 0.05 M solution of o-hydroxy mercurobenzoate of Na (I) until the disappearance of the violet color. The solution of I is prepared by dissolving o-hydroxy mercurobenzoic anhydride in a 0.25 N NaOH solution. A titre of the solution obtained is determined iodometrically; for that purpose 10 millimeters of concentrated sulfuric acid and 10 millimeters of 0.1N iodine solution are added to 10 millilit-

Card 2/3

28

The trithiocarbonate formation in the xanthate reaction  
is very slow without the addition of a catalyst. The rate of the reaction is  
increased by the addition of a catalyst. The catalyst used is  
a mixture of sodium hydride and sodium cyanide.

Chen

POLAND / Laboratory Equipment, Apparatus; Their Theory,  
Construction and Application.

F

Abstr Jour : Ref Zhur - Khim., No 10, 1958, No 32280

Author : Jozef Chrzaszowski, Mieczyslaw Wronski.

Inst : -

Title : Simple Determination Method of Isotherm of Vapor Adsorption  
on Solid Substances.

Orig Pub : Roczn. chem., 1957, 31, No 1, 297-299

Abstract : A simple apparatus for measuring isotherms of vapor  
adsorption is described. The apparatus consists of a gas  
burette connected with a Hg manometer, vacuum installation  
and two vessels with faucets for the adsorbent and adsorbed  
substance. Computation equations are presented.

Card 1/1

*WRONSKI M.*  
POLAND / Laboratory Equipment, Apparatus, Their Theory, F  
Construction and Application.

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60749.

Author : Mieczyslaw Wronski.

Inst : -

Title : Effect of Width of Spectral Zone on Photometric Measurements.

Orig Pub: Roczn. chem., 1957, 31, No 1, 309-313.

Abstract: The effect of the polychromaticity of light on the extinction (E) measurements was computed. Making some simplifying assumptions, the author receives for the value of E:  $E = \log[2.3(\sum_2 - \sum_1)k/(10^{-k\sum_1} - 10^{-k\sum_2})]$ , where k is the product of the solution concentration and the thickness of the absorbing layer, and  $\sum_2$  and  $\sum_1$  are the E factors at the

Card 1/2

1

✓ Titration of hydrogen sulfide and other sulfides with organic mercury compounds. (Aliczyslaw Wroński and Philipp Burkart. *Faserforsch. u. Textiltech.* 9, 38-7 (1958).—A 0.05N soln. of 2-HOCC<sub>6</sub>H<sub>4</sub>HgOH is used for the titration of S<sup>2-</sup> or HS<sup>-</sup>, a colorless 0.5% soln. of thiofluorescein (the dimercapto analog of fluorescein) in 0.1N NaOH being used as indicator. In the presence of S<sup>2-</sup>, a sharp change to dark blue indicates the end of the titration. The presence of large amts. of I<sup>-</sup>, NCS<sup>-</sup>, or Cl<sup>-</sup> does not disturb the reaction. Since CN<sup>-</sup>, xanthates, or S<sub>2</sub>O<sub>3</sub><sup>2-</sup> disturb the reaction, the use of dithione as indicator is recommended when xanthates or S<sub>2</sub>O<sub>3</sub><sup>2-</sup> is present in larger amts. Polysulfides are also titrated, but the addn. of SO<sub>3</sub><sup>2-</sup> is indicated for better end-point detn. The method shows excellent correlation with the complexometric detn. and is also suitable for the H<sub>2</sub>S analysis of air or exhaust gases. Paul D. Burgauer

WRONSKI, M.

Organic mercury compounds in chemical analysis. Młec.

Wronski (Univ. Łódź, Poland). *Zeszyty Nauk. Univ. Łódzkiego*, Ser. II No. 4, 181-93 (1958) (English summary).

Compds. of the type  $RHgOH$ , sol. in alkalies owing to the presence of OH or COOH groups (mainly  $\alpha$ -HOC<sub>2</sub>H<sub>4</sub>HgOH (I)), were used in the volumetric detn. of some S compds. in the presence of color indicators. The titrant (0.05M) was prepd. by dissolving I in 0.2N NaOH and standardized with Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> or Na<sub>2</sub>S. To det. S<sup>2-</sup>, 100 ml. of a soln. contg.  $5 \times 10^{-3}$  -  $2 \times 10^{-2}$  g. H<sub>2</sub>S was treated with 5 ml. N KOH or NaOH, 1 ml. of 0.1% dithizone in EtOH, and titrated with I until the yellow color turned red; SO<sub>3</sub><sup>2-</sup>, S<sub>2</sub>O<sub>3</sub><sup>2-</sup>, CNS<sup>-</sup>, thiourea, and moderate quantities of xanthates (II) (unlike mercaptans, thiocarbonates (III), and CN<sup>-</sup>) did not interfere with the detn. Dithiocarbamates were titrated in the presence of dithiofluorescein (IV) (0.05% soln. in 0.01N NaOH with I-Na added to full decolorization) until the blue color completely disappeared. Na<sub>2</sub>S<sub>2</sub> can be titrated like Na<sub>2</sub>S, but more reliably after reln. to Na<sub>2</sub>S by heating with 10% Na<sub>2</sub>SO<sub>3</sub> and then titrating as usual (result A); to det. Na<sub>2</sub>S and Na<sub>2</sub>S<sub>2</sub> in mixts. a 2nd titration was necessary. The soln. tested was treated with excess I, heated to boiling, cooled, treated with excess Na<sub>2</sub>S, and titrated as usual (result B); Na<sub>2</sub>S content =  $2.5(A - 0.6B)$  and Na<sub>2</sub>S<sub>2</sub> content =  $1.5(B - A)$ . III were detd. most conveniently by titrating with Na<sub>2</sub>S the excess of

I in the presence of IV, or by direct titration with Hg(NO<sub>3</sub>)<sub>2</sub> in slightly alk. medium; S<sup>2-</sup> interfered with this detn., but the sum of S<sup>2-</sup> and III was detd. by adding a known quantity of I prior to titration. To det. S<sub>2</sub>O<sub>3</sub><sup>2-</sup>, a sample equiv. to 5-10 ml. of 0.01N Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> was treated with 20 ml. acetate buffer, dild. to 100 ml. treated with 1 ml. 0.1% EtOH soln. of diphenylcarbazone (V), and titrated to

a blue color; SO<sub>3</sub><sup>2-</sup>, I<sup>-</sup>, CNS<sup>-</sup>, and thiourea obstructed the detn. Thiophenols, II, and mercaptobenzthiazoles were titrated with bis(hydroxymercury)thymol (VI) or Hg(NO<sub>3</sub>)<sub>2</sub> in slightly alk. medium, and in the presence of V; the detn. was obstructed by I<sup>-</sup>, S<sub>2</sub>O<sub>3</sub><sup>2-</sup>, SO<sub>3</sub><sup>2-</sup>, and thiourea, but not by SO<sub>3</sub><sup>2-</sup>, Cl<sup>-</sup>, and small quantities of CNS<sup>-</sup>, Br<sup>-</sup>, or NH<sub>4</sub><sup>+</sup>. To det. II in the presence of S<sup>2-</sup> and III, the soln. was acidified with N HCl and then made alk. with N NaOH; transforming thereby III into S<sup>2-</sup>, the sum of which was detd. by I titration; in a sep. sample all 3 components were detd. iodometrically, and II was calcd. as the difference. The system Na<sub>2</sub>S-Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>SO<sub>3</sub> was titrated with VI, S<sup>2-</sup> in the presence of IV, and then, after adding NH<sub>4</sub>Cl, thiosulfates in the presence of V; SO<sub>3</sub><sup>2-</sup> was detd. by addnl. iodometric titration. Hg derivs. of phenolphthalein and fluorescein proved sensitive to some S compds.; this property may be useful in colorimetric assays. Titration of S compds. with I can be reversed and used for detg. Hg in org. compds.; IV was preferred in such detns. and used in excess which should be back-titrated with standard Hg(NO<sub>3</sub>)<sub>2</sub>. All indicators are described in detail; monothiodifluorescein, dimercaptophenolphthalein, and di-2-naphthylthiocarbazon were used besides those mentioned above. Dissocn. consts. of the following adducts were detd. photometrically: I + IV,  $2.30 \times 10^{-4}$  in 0.04N, and  $0.25 \times 10^{-4}$  in 0.002N NaOH; I + V,  $2.08 \times 10^{-4}$  in 0.03N, and  $1.58 \times 10^{-4}$  in 0.002N NaOH; I + V -  $0.1 \times 10^{-4}$  at pH 5.0. J. Lange

92(NB)  
3

B

Country : Poland  
 Category : Physical Chemistry - Kinetics. Combustion. Ex-  
 plosions. Topochemistry. Catalysis. 45131  
 Abs. Jour : RZhKhim., No 13, 1959  
 Author : Wronski, M.  
 Institut. : Not given  
 Title : The Kinetics of the Reaction of Sodium Hydrate  
 with Carbon Disulfide  
 Orig. Pub. : Roczniki Chem, 32, No 4, 849-861 (1958)  
 Abstract : The author has investigated the kinetics of the  
 reaction of NaOH with CS<sub>2</sub> as a function of the  
 concentration of the alkali solution (0.45-5.00 M)  
 at 15 and 25°. The effect of the addition of  
 Na<sub>2</sub>SO<sub>3</sub> (0.125 M Na<sub>2</sub>SO<sub>3</sub> in 1 M NaOH) on the reac-  
 tion rate was studied. The concentration of the  
 reaction products, Na<sub>2</sub>S and Na<sub>2</sub>CS<sub>3</sub>, was determined  
 by amperometric titration. It has been found that  
 the rate of NaOH consumption is described by the  
 equation:  

$$-d[\text{NaOH}]/dt = k_1 [\text{NaOH}][\text{CS}_2]$$
  
 and that the rate of Na<sub>2</sub>CS<sub>3</sub> formation follows the  
 equation:

Card: 1/3

Country : Poland

B

Category :

Abs. Jour :

45151

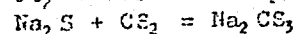
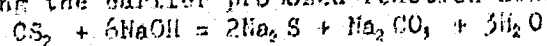
Author :

Institut. :

Title :

Orig Pub. :

Abstract :  $d[\text{Na}_2\text{CS}_3] = k_2[\text{Na}_2\text{S}][\text{CS}_2] + k_3[\text{NaOH}][\text{CS}_2]$  (1)  
The value of  $k_2$  increases with increasing initial concentration of the NaOH solution, as can be expected on the basis of current theories on the solvation of the  $\text{S}^{2-}$  ion. The addition of  $\text{Na}_2\text{SO}_3$  has no effect on the reaction rate. Notwithstanding the earlier proposed reaction scheme :



(BZhKhim, No 2, 1953, 1574), the formation of  $\text{Na}_2\text{CS}_3$  according to equation (1) proceeds in a more complicated way. In the opinion of the author the initial step in the reaction of NaOH with

Card: 2/3



Country : Poland  
Category :

B.

Abs. Jour : 45131

Author :  
Institut. :  
Title :

Orig Pub. :

Abstract :  $\text{CS}_2$  involves the formation of the ion  $\text{CS}_2\text{OH}^-$  by the reaction  

$$\text{CS}_2 + \text{OH}^- = \text{CS}_2\text{OH}^- \quad (2)$$
  
 The latter ion dissociates in two ways:  

$$\text{CS}_2\text{O}^{2-} + \text{CS}_2 = \text{CS}_2\text{S}^{2-} + \text{COS}$$
  

$$\text{COS} + 4\text{OH}^- = \text{CO}_3^{2-} + \text{S}^{2-} + 2\text{H}_2\text{O}$$
  
 and  

$$\text{SH}^- + \text{OH}^- = \text{S}^{2-} + \text{H}_2\text{O} \text{ [sic]}$$
  
 For reaction (2) values of  $\Delta H^\ddagger = 21.4 \text{ kcal/mol}$   
 and  $\Delta S^\ddagger = 0 \text{ e.u.}$  have been obtained.  
 C. Folotnyuk

Card: 3/3

P/012/59/004/03/05/020

82240

5.3200

AUTHOR:

Wroński, M.

TITLE:

The Kinetics of the Xanthate Reaction of Starch, Cellulose and Sodium Alginate

PERIODICAL:

Societas Scientiarum Lodziensis Acta Chimica, 1959, Vol 4, pp 47 - 54

TEXT:

Owing to the great technological importance of the process of cellulose sulphidizing, numerous investigations of this reaction have been carried out before, but methods used were such that clear interpretation of results was impossible. This was so, because the reactions between alkali-cellulose and gaseous carbon disulphide are rather complicated owing to the adsorption and diffusion which obscures the real kinetic course. In this investigation, measurement of the sulphidizing rates in a single phase arrangement were carried out with a constant concentration of carbon disulphide. Because of this, the interpretation of results was easy. The process of formation of cellulose and starch xanthates, sodium salt of alginic acid and of some by-products was examined; the speed of cellulose xanthate decomposition in NaOH solutions was also investigated. From the results

Card 1/2

OK

82240

P/012/59/004/03/05/020

The Kinetics of the Xanthate Reaction of Starch, Cellulose and Sodium Alginate

obtained the speed of reaction constants was calculated. In the case of starch it was found that introduction of the second xanthate group into the glucose ring is much more difficult than in the case of cellulose. Sodium hydroxide and sodium chloride both suppress the speed of cellulose xanthate decomposition. There are 4 figures, 2 tables and 6 references: 3 Polish, 2 German and 1 English.

ASSOCIATION: Katedra Technologii Chemicznej Uniwersytetu Łódzkiego (Lodz University, Department of Chemical Technology)

PRESENTED: March 11, 1960

Card 2/2

P/012/59/004/03/06/020

5.1200

AUTHOR:

Wroński, M.

82241

TITLE:

The Kinetics of the Xanthate<sup>1</sup> Reaction of Allyl and Furfuryl Alcohol, Glycolic Acid and Methylene Glycol<sup>1</sup>

PERIODICAL:

Societas Scientiarum Lodziensis Acta Chimica, 1959, Vol 4, pp 55 - 63

TEXT:

The author presents the continuation of his investigations concerning the mechanism of xanthate reaction, generally expressed by the following equation:  $ROH + NaOH + CS_2 = ROCSSNa + H_2O$ . The process of formation and decomposition of xanthates of aliphatic mono- and polyalcohols, glucose and saccharose has been investigated by the author before. This report presents the results of investigations concerning the influence of some groupings on the course of xanthate reaction. Apparently no investigations of xanthation of such alcohols has been made yet so far. The process of xanthate and by-product formation during the sulphidizing of allyl- and alpha furfuryl alcohols, glycolic acid and methylene glycol at 15° and 25° as well as the speed of allyl xanthate decomposition at 55° and 65°C were investigated. From results obtained the speed of reaction constants

Card 1/2

P/012/59/004/03/06/020

The Kinetics of the Xanthate Reaction of Allyl and Furfuryl Alcohol, Glycolic Acid and Methylene Glycol

82241

was calculated. Allyl alcohol and glycolic acid form fairly stable xanthates, while methylene glycol xanthate hydrolyses instantaneously after formation. In conformity with this, methylene glycol catalyses the hydrolysis of carbon disulphide in the presence of NaOH. During the process of alpha-furfuryl alcohol sulphidizing the monothiocarbonate appears in quantities largely exceeding the amount of by-products formed. This could be explained if one admits that sulphur can extrude oxygen from the furan ring. No reaction has been observed between sodium phenolate and carbon disulphide. There are 5 figures, 1 table and 7 references: 1 English and 6 Polish.

ASSOCIATION: Katedra Technologii Chemicznej Uniwersytetu Łódzkiego (Lodz University, Department of Chemical Technology)

PRESENTED: March 11. 1959

Card 2/2

WRONSKI, M.

✓ Kinetics of xanthation of polybasic alcohols. Mieczysław Wronski (Univ. Łódź, Poland). *Zeszyty Nauk. Chm. Łódzkiego*, Ser. II, No. 3, 191-202 (1959).—Xanthation of ethylene glycol (I), glycerol (II), D-glucose (III), and triethylene glycol (IV) was investigated kinetically as earlier methylene glycol (V) was investigated kinetically as earlier (preceding abstr.). The following data were found in solns. contg. 50 g./l. of the alc. in 0.5N NaOH (compd., temp.,  $k_1$ ,  $k_2$ ,  $k_3$ , and  $k_4$  given): I, 15°, 0.46, 0,  $2.4 \times 10^{-3}$ , 0,  $5 \times 10^{-3}$ ; II, 25°, 1.1, 0,  $6.8 \times 10^{-3}$ , 0,  $8 \times 10^{-3}$ ; III, 15°, 0.79, 0, 0.16, 0,  $6.8 \times 10^{-3}$ ; IV, 25°, 1.0, 0, 0.36, 0,  $2.4 \times 10^{-3}$ ; V, 15°, 0.43, 2.5  $\times 10^{-3}$ , 0,  $2.2 \times 10^{-3}$ ; 2.0  $\times 10^{-3}$ ; III, 25°, 1.3, 1.2  $\times 10^{-3}$ , 0, 0.14,  $6.1 \times 10^{-3}$ ; IV, 15°, 0.384, —, —, —; IV, 25°, 0.915, —, —, —; IV, 40°, —,  $9.4 \times 10^{-4}$ , —,  $5 \times 10^{-4}$ ; IV, 50°, —,  $1.7 \times 10^{-3}$ , —,  $1.4 \times 10^{-3}$ .—Decomn. of the xanthates of I and II followed the equation  $-dx/dt = k_1x$ , [NaOH], whereas those of III and IV decompd. according to  $-dx/dt = k_2x + k_3[NaOH]^2$ . Several graphs were reproduced and detailed anal. procedure was given. J. Lange

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1-jaj/MB

7  
 ✓ Synthesis of 2-(*o*-hydroxyphenyl)benzoxazole. Mieczysław Wroński (Univ. Łódź, Poland). *Roczniki Chem.* 33, 809-10 (1959) (English summary).—P<sub>2</sub>O<sub>5</sub> (28 g.) is added during 2 hrs. to 15 g. salicylic acid and 10 g. *o*-aminophenol with intensive mixing and keeping the temp. at 160-80°. The product is heated with H<sub>2</sub>O, filtered, the ppt. dissolved in 100 ml. hot EtOH, again pptd. by diln. with H<sub>2</sub>O, and purified further (Walter and Freiser, C.A. 46, 9011f). The yield of 2-(*o*-hydroxyphenyl)benzoxazole, m. 122-4°, is 60%.  
 A. Kreglewski

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 4E 3 d  
 122 (N/B)

Card 1/1

aht

99

WRONSKI, Mieczyslaw

Kinetics of xanthate reaction of simple alcohols. Roczniki chemii 33  
no.4/5:1061-1069 '59. (KAI 9:9)

1. Zaklad Technologii Chemicznej Uniwersytetu, Lodz.  
(Xanthates) (Carbon disulfide) (Methanol)  
(Ethyl alcohol) (Propyl alcohol) (Butyl alcohol)  
(Isopropyl alcohol)



WRONSKI, M.

Distr: 4E2o(j)

The kinetics of decomposition of xanthogenates in sodium hydroxide solutions. Mieczysław Wróński (Univ. Łódź, Poland). *Roczniki Chem.* 33, 1071-80 (1959) (German summary).—The rate of decompn. of Me, Et, Pr, iso-Pr, and Bu xanthogenates at 65 and 75° is expressed by the following equation as a function of NaOH concn.:  $-dx/dt = k_1x +$

$k_2x[\text{NaOH}]^2$ . The ratio  $k_1/k_2$  is about 2 for the Me ester and about 3 for others. The values of the consts. decrease: Me > Et > Bu > iso-Pr. For NaOH concns. below 0.3N the reaction can be expressed by  $-dx/dt = k_1x$ .

A. Kreglewski

3:  
1-gg(NB)  
1

gg

WRONSKI, M.

Kinetics of the xanthate reaction of simple alcohols.  
M. Wronski (Univ. Lodz, Poland). *Z. physik. Chem.*  
(Leipzig) 211, 113-17 (1959). The xanthate reaction of  
simple alcs. is assumed to proceed according to:  $\text{ROH} +$   
 $\text{OH}^- \rightarrow \text{RO}^- + \text{H}_2\text{O}$ ;  $\text{RO}^- + \text{CS}_2 \rightarrow \text{ROCSS}^-$ . If  $dx/dt$   
 $= k_1[\text{RO}^-][\text{CS}_2]$ ,  $K = [\text{RO}^-]/[\text{ROH}][\text{OH}^-]$ ,  $\xi = [\text{S}^{--}] +$   
 $[\text{CS}_3^{--}]$ , and  $a =$  initial concn. of ROH, then  $\ln[a/(a -$   
 $x)] = k_1 K \xi / k_2$ . The values obtained by aid of this equation  
conform well with those found in the literature. P. E.

3  
292 (18)

99

WRONSKI, M.

4250  
1154

Maximum reaction velocity of carbon disulfide in sodium hydroxide. M. Wronski (Univ. Lodz, Poland). Z. physik. Chem. (Leipzig) 211, 113-20 (1959); cf. C.A. 52, 15211b. The reaction velocity of CS<sub>2</sub> in NaOH shows a distinct max. that is caused by the slope of the product (OH<sup>-</sup>)(CS<sub>2</sub>) as a function of the NaOH ((CS<sub>2</sub>) = const. concn. of CS<sub>2</sub> in NaOH). This max. can be calcd. by aid of this formula:  $(OH^-)(CS_2) = y = G(CS_2) = G \times 10^{4-A}$ , wherein  $G = (NaOH)$  in mole/l.,  $m = 0.163$ , and  $A =$  a temp.-dependent const. If for a given end concn. of NaOH,  $G_1$ , the initial concn.,  $G_0$ , is so to be chosen that the reaction runs off in a min. of time,  $G_0$  can be detd. by  $G_{0, min} = (1/2.3m) + \sqrt{(1/2.3m)^2 + G_1^2}$ . Friedrich Epstein

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WRONSKI, Mieczyslaw

Indirect mercurimetric determination. Chem anal 5 no.1:101-107 '60.  
(EEAI 9:11)

1. Zaklad Technologii Chemicznej Uniwersytetu, Lodz.  
(Mercurimetry)

WRONSKI, Mieczyslaw

Determination of small amounts of silver and mercury by using  
thiofluorescein. Chem anal 5 no.2:289-291 '60. (EEAI 10:3)

1. Zaklad Technologii Chemicznej Uniwersytetu, Lodz.  
(Silver) (Mercury) (Thiofluorescein)

WRONSKI, Mieczyslaw

Argentometric determination of cyanide with a thiofluorescein indicator.  
Chem anal 5 no.2:293-296 '60. (EEAI 10:3)

1. Zaklad Technologii Chemicznej Uniwersytetu, Lodz.  
(Argentometry) (Cyanides) (Thiofluorescein)

WRONSKI, Mieczyslaw

The indirect colorimetric determination of sulfide and cyanide  
with the aid of thiofluorescein. Chem anal 5 no.3:457-460 '60.  
(EEAI 10:8)

1. Zaklad Technologii Chemicznej Uniwersytetu, Lodz.  
(Colorimetry) (Sulfides) (Cyanides) (Thiofluorescein)

WRONSKI, Mieczyslaw

Titration of mercury and nickel salts with cysteine solution.  
Chem anal 5 no.3:511-512 '60. (KEAI 10:8)

1. Zaklad Technologii Chemicznej Uniwersytetu, Lodz.  
(Mercury) (Nickel) (Cysteine) (Solutions)



WRONSKI, Mieczyslaw

Volumetric determination of trace amounts of copper with oxin blue.  
Chem anal 5 no.4:597-599 '60. (EEAI 10:9)

1. Department of Chemical Technology, Lodz.

(Copper) (Oxin blue)

WRONSKI, Mieczyslaw

Rapid determination of mercury compounds in crude phenylmercury  
acetate. Chem anal 5 no.4:601-604 '60. (EEAI 10:9)

1. Department of Chemical Technology, University, Lodz.

(Mercury) (Phenylmercury acetate)

WRONSKI, Mieczyslaw

Mercurimetric determination of styrene, acrylonitrile and methyl  
acrylate. Chem anal 5 no.5:823-826 '60. (ZEAI 10:9)

1. Department of Chemical Technology, University, Lodz.

(Mercurimetry) (Styrene) (Acrylonitrile)  
(Methacrylate)

WRONSKI, Mieczyslaw

The influence of acids on the rate of mercurization of phenol and aniline. Roczniki chemii 34 no.3/4:947-952 '60. (EEAI 10:3)

1. Katedra Technologii Chemicznej Uniwersytetu, Lodz.  
(Acids) (Phenol) (Aniline) (Mercury)

WRONSKI, Mieczyslaw

Desulfurating titration of organic sulphur compounds. Chem anal 6  
no.5:869-876 '61.

1. Department of Chemical Technology, University, Lodz.

WRONSKI, Mieczyslaw, Doc. Dr. inz. (Lodz, Nowotni 18)

Mercurimetric determination of sulfur compounds applying acrylonitrile  
as selective masking agent. Acta chimica Hung 28 no.1/3:303-309  
'61. (EEAI 10:9)

1. Institut für Chemische Technologie der Universität Lodz, Polen.

(Mercurimetry) (Sulfur) (Acrylonitrile)

WRONSKI, Mieczyslaw

Accuracy of titration of sulfide with the sodium salt of  
o-hydroxymercuribenzoic acid. Nauki matematyczne Lodz  
no.10:205-210 '61.

1. Department of Chemical Technology, University, Lodz.

WRONSKI, Mieczyslaw; HAZEK, Lucyna

Kinetics of the hydrolysis of Phenyl isothiocyanate in solutions of sodium hydroxide. Nauki matematyczne Lodz no.12:155-162 '62.

1. Katedra Technologii Chemicznej, Uniwersytet, Lodz.



WRONSKI, Mieczyslaw

Speedy determination of mercury in mercury preparations.  
Chem anal 7 no.4:821-826 '62.

1. Department of Chemical Technology, University, Lodz.

WRONSKI, Mieczyslaw

Determination of thioglycolic acid in the presence of sulfide, sulfite and thiosulfate. Chem anal 7 no.4:851-854 '62.

1. Department of Chemical Technology, University, Lodz.

WRONSKI, Mieczysław

Microdetermination of sulfides and thiourea in thiocyanates.  
Chem anal 7 no.5:1009-1010 '62.

1. Katedra Technologii Chemicznej, Uniwersytet, Lodz.

WRONSKI, Mieczyslaw

Determination of mercuric acid in phenylmercuric acetate. Chem  
anal 7 no.5:1011-1012 '62.

1. Katedra Technologii Chemicznej, Uniwersytet, Lodz.

S/081/63/000/003/008/036  
B144/B186

AUTHOR: Wronski, Mieczysław

TITLE: Desulfurating titration of organic sulfur compounds

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, 1963, 141, abstract  
3G159 (Chem. analit. (Polska), v. 6, no. 5, 1961, 869-876  
[Eng.; summary in Pol.] )

TEXT: When o-hydroxy mercury benzoic acid (OA) acts on compounds contain-  
ing CS groups in alkaline medium, compounds of the type R-Hg-S-Hg-R are  
formed. It is suggested that this reaction be used for determining  
compounds containing hydrolyzable sulfur (e. g. thiourea, thioacetamide)  
by direct titration of the solutions with OA. Making use of the differences  
in reaction rates, it is possible by this method to determine the sulfur  
compounds separately in the presence of others. The reaction rate  
increases with increasing concentration of the base and rising temperature.  
The compounds studied can be arranged in the following order according to  
the decreasing rate of reaction with OA: phenyl monothiocarbamate (I),  
ethyl dithiocarbamate (II), benzyl dithiocarbamate (III), phenyl dithio-  
carbamate (IV), dithiocarbamate (V),  $\beta$ -amino ethyl dithiocarbamate (VI),  
Card 1/4

Desulfurating titration of organic ...

S/081/63/000/003/008/036  
B144/B186

$\beta$ -hydroxy ethyl dithiocarbamate (VII), diphenyl thiourea (VIII), rubeanic acid (IX), ethyl monothiocarbamate (X), rhodanine (XI),  $\beta$ -naphthyl thiourea (XII), thiourea (XIII), thiosemicarbazide (XIV), thioacetamide (XV), cellulose xanthate (XVI), trithiocarbonate (XVII), methyl xanthate (XVIII), bis-hydroxy ethyl dithiocarbamate (XIX), mercapto thiazoline (XX), dithiocarbazine (XXI), phenyl dithiocarbazine (XXII), ethyl xanthate (XXIII), diethyl dithiocarbamate (XXIV), o-phenylene thiourea (XXV), mercapto benzothiazole (XXVI), ethylene thiourea (XXVII), mercapto thioketo thiodiazole (XXVIII), thiosulfate (XXIX), thiocyanate (XXX). For determining I, and V - X, 5 ml 1 N NaOH solution, water or (in the case of insoluble compounds)  $\text{CH}_3\text{OH}$  up to a volume of 30 to 50 ml are added to the sample, and the mixture is titrated with 0.001 - 0.05 N OA solution, as described previously (RZhKhim, 1960, no. 20, 80867). As indicator is added 0.5 ml of 20 mg thiofluorescein (XXXI) dissolved in several ml of 1 N  $\text{NH}_4\text{OH}$  solution, diluted to a volume of 50 ml by 0.05 N solution of ethylene diamine tetraacetic acid, or 0.2 ml 0.1% solution of dithizone, (XXXII) in  $\text{C}_2\text{H}_5\text{OH}$ . In the first case titration is carried out till the blue color disappears; in the second case till the yellow color

Card 2/4

Desulfurating titration of organic ...

S/081/63/000/003/008/036  
B144/B186

turns purple. Titration is carried out at 30 - 40°C. Samples II-IV are prepared in the same manner; 5 - 20 ml toluene is added to the solution and titrated at 20°C in the presence of XXXI, as long as the blue color does not disappear for at least 30 sec. Samples XI - XV are dissolved in 5 ml 1 N NaOH solution, diluted to a volume of 25 ml and titrated with 0.05 N OA solution at 80 - 90°C in the presence of XXXI. In the titration of XII - XV 1 - 2 ml excess OA solution is added; after some minutes 25 ml cold water and 2 ml 0.1 N Na<sub>2</sub>S solution containing 2% Na<sub>2</sub>S and 1% NaOH, are added, and the Na<sub>2</sub>S excess is titrated with OA solution in the presence of XXXII. The amount of OA solution consumed in the titration of the added quantity of Na<sub>2</sub>S is determined separately. To samples XVI and XVII, up to 20 ml 1 N NaOH solution is added, heated to boiling, and an excess of 0.05 N OA solution is added; after 5 min, 30 ml 1 N NH<sub>4</sub>NO<sub>3</sub> solution, 50 ml cold water and 2 - 4 ml Na<sub>2</sub>S solution are added, and the Na<sub>2</sub>S excess is titrated in the presence of XXXI. XVIII - XX are boiled for 5 - 10 min in alkaline

Card 3/4

Desulfurating titration of organic ...

S/081/63/000/003/008/036  
B144/B186

solution with CA excess. XXI - XXX cannot be determined by the method described. I - X can be determined in the presence of XIII - XXX; therefore titration must be conducted at 25°C. XXV - XXX do not interfere with the determination of I - XVII. [Abstracter's note: Complete translation.]

Card 4/4



WRONSKI, Mieczyslaw

Mercurimetric determination of some sulfides.  
Nauki matemat. przyrod. Lodz no.13:141-145 '62.

1. Katedra Technologii Chemicznej, Uniwersytet, Lodz.

WRONSKI, Mieczyslaw

Determination of equivalent weight of organic acids by titration  
of benzylthiuronium salts with a HMB solution. Chem anal  
8 no.1:113-115 '63.

1. Katedra Technologii Chemicznej, Uniwersytet, Lodz.

WRONSKI, Mieczyslaw

Thiomercurimetric determination of boron organic compounds.  
Chem anal 8 no.2:299-300 '63.

1. Katedra Technologii Chemicznej, Uniwersytet, Lodz.

WRONSKI, Mieczyslaw

Mercurimetric determination of cystine together with  
cysteine and sulfides. Chem anal 8 no.3:467-471 '63.

1. Katedra Technologii Chemicznej, Uniwersytet, Lodz.

WRONSKI, Mieczyslaw; BOGDANSKI, Janusz

Kinetics of cyanoethylation reaction of water, alcohols, amines,  
and sulfhydryl compounds. Nauki matemat. przyrod. Lodz no.14:153-174  
'63.

1. Katedra Technologii Chemicznej, Uniwersytet, Lodz.

WRONSKI, Mieczysław, doc. dr inż.

Thiomercurimetric titration. Wiad chem 17 no.1:1-27 Ja '63.

1. Kierownik Katedry Technologii Chemicznej, Uniwersytet,  
Lodz.

WRONSKI, Mieczyslaw, doc. dr

Thiomercurimetric determination of nitrites. Chem anal 9 no.1:  
169-170 '64.

1. Katedra Technologii Chemicznej, Uniwersytet, Lodz.

L 31411-66

ACC NR: AP6022964

SOURCE CODE: CZ/0008/65/000/009/1079/1085

AUTHOR: Wronski, Mieczyslaw

ORG: Institute of Chemical Technology, University, Lodz (Instytut Technologii Chemicznej Uniwersytetu)

TITLE: Analytical methods in the chemistry of sulfur compounds based on the application of mercury compounds

SOURCE: Chemicke listy, no. 9, 1965, 1079-1085

TOPIC TAGS: desulfurization, sulfide, mercaptan, cystine

ABSTRACT: S compounds are usually determined by reactions based on neutralization, oxidation, or formation of complexes. For selective determination of S, its compounds with metals are used. The use of Cu and Ag is reviewed and the limitations of these metals discussed. Hg offers these advantages: The bond between Hg and S is very strong; mercurimetric titrations are suitable even in the presence of substances that would make other methods unusable. The equivalence point can be indicated electrometrically or by the use of indicators; a great number of organic compounds of mercury may be used as reagents. Selective determinations of sulfides and mercaptans, cystine and cysteamine, selective desulfurization titration, and the use of selective masking agents are discussed. Orig. art. has: 2 tables. [JPRS]

SUB CODE: 07 / SUBM DATE: 11Jun64 / ORIG REF: 034 / OTH REF: 057

Card 1/1

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WRONSKI, S.																																																																													
EFFECT OF TEMPERATURE ON THE INTENSITY OF X-RAYS REFLECTED FROM VARIOUS PLANES OF ZINC CRYSTAL. S. Wronski. <i>Acta Phys. Polon.</i> 7, 357-60 (1938) (in German).—The relative intensities of x-rays reflected from various crystallographic planes of metallic Zn were detd. by the Debye-Scherrer method at room temp. and at 367°K. From these measurements the following values were calcd. for the amplitudes of thermal oscillation of Zn atoms at room temp.: $\mu_1 = 0$ (parallel to the c-axis) = 0.127 Å.; $\mu_2 = 90$ (perpendicular to the c-axis) = 0.0734 Å. The characteristic temps. calcd. from these values are $\theta_1 = 200^\circ\text{K}$ . and $\theta_2 = 367^\circ\text{K}$ . resp. R. Jozefowicz																																																																													
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<p>Influence of temperature on the intensity of Röntgen rays reflected from different planes of the zinc crystal. S. WRONSKI (Acta Phys. Polon., 1939, 7, 357—366).—The relative intensities of reflection from different lattice planes of the Zn crystal have been measured at room temp. and 567° K. by the Debye-Scherrer method. At room temp. the amplitudes of heat oscillations of the Zn atom in the direction of and normal to the c-axis are calc. to be 0.127 and 0.0734 Å. Calc. vals. for the characteristic temperature of Zn are <math>\Theta_H</math>, 200° K., <math>\Theta_L</math>, 347° K.</p>																																																																																																																																																																																																																																											
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POLAND/Physical Chemistry. Thermodynamics. Thermochemistry. B  
Phase Transitions. Equilibria. Physico-Chemical  
Analysis.

Abs Jour: Ref. Zhur. - Khimiya, No. 4, 1959, 10987

Authors : Ciborowski J., Wronski S.

Inst : Not given

Title : A Psychometric Chart for the System, Air - Ethyl  
Acetate.

Orig Pub: Chem. stosow, 1958, 2, 147-152.

Abstract: On the basis of literature data, a psychometric  
diagram was drawn for the system, air - ethyl  
acetate. A disagreement between the psychometric  
and adiabatic lines was discovered. A comparison  
of some points, taken from this diagram, with a  
few experimental results, previously obtained  
(Mark I. G., Trans. Amer. Inst. Chem. Engrs., 1932;

Card 1/2

COUNTRY	: Poland	H-8
CATEGORY	:	
ABS. JOUR.	: RZKhim., No. 21 1959, No.	75402
AUTHOR	: Ciborowski, J. and <u>Wronski, S.</u>	
INST.	: Not given	
TITLE	: The Reduction of Sodium Sulfate with Hydrogen in Fluidized Beds	
ORIG. PUB.	: Przemysl Chem, 37, No 8, 520-522 (1958)	
ABSTRACT	<p>: The possibility of carrying out the reduction of <math>\text{Na}_2\text{SO}_4</math> in fluidized beds at temperatures exceeding the melting point of the eutectic has been investigated. The reaction proceeds at low sulfate concentrations and at high hydrogen rates, assuring intensive mixing. The sulfate is reduced in 8 min when mixtures containing 5 and 7.5% sulfate are used and the grain size in the charge is 0.15-0.3 mm, in the presence of 1% iron (catalyst). The reduction is accompanied by an increase in the size of the grains as a result of agglomeration.</p> <p style="text-align: right;">From authors' summary</p>	

CARD: 1/1

CIBOROWSKI, Janusz; WRONSKI, Stanislaw

Investigation of sublimating condensation of naphthalene by mixing  
with fluidal charge. Chemia stosow 3 no.4:447-460 '59. (KEAI 9:6)

1. Zaklad Inzynierii Chemicznej Politechniki Warszawskiej i  
Instytutu Chemii Ogolnej.  
(Naphthalene)

WRONSKI, S.

5(2)

SOV/80-32-3-1/43

AUTHORS: Cyborowski, F., Wronski, S.

TITLE: Reduction of Sodium Sulfate by Hydrogen in a Pseudo-Liquefied Layer (Vosstanovleniye sul'fata natriya vodorodom v pseudo-ozhizhennom sloye)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol XXXII, Nr 3, pp 473-477 (USSR)

ABSTRACT:  $\text{Na}_2\text{S}$  may be obtained by the reduction of  $\text{Na}_2\text{SO}_4$  using hydrogen as reducing agent [Ref 1, 2]. An apparatus has been developed for this purpose (Figure 1). The experiments were carried out in two series: in homogeneous  $\text{Na}_2\text{SO}_4$  and in a mixture of  $\text{Na}_2\text{SO}_4$  and  $\text{Na}_2\text{S}$ . The reaction in the homogeneous substance proceeded in various stages at 62°C, 640, 680 and 720 - 760°C. The final product contained 86 - 97%  $\text{Na}_2\text{S}$ . In the mixture hydrogen was introduced at the rate of 20 l/min. At low temperatures the sulfide yield was 88%, above 700°C 97%. An iron catalyst in the amount of 1% was used in the experiments. The consumption of hydrogen was only 5% under the most favorable conditions.

Card 1/2 There are 3 graphs, 1 diagram and 10 references, 3 of which

SOV/80-32-3-1/43

Reduction of Sodium Sulfate by Hydrogen in a Pseudo-Liquefied Layer

are Soviet, 3 German, 2 English, 1 Polish and 1 American.

ASSOCIATION: Kafedra protsessov i apparatov khimicheskoy tekhnologii Varshavskogo politekhnicheskogo instituta i instituta obshchey khimii (Chair of Processes and Apparatuses of Chemical Technology of the Warsaw Polytechnical Institute and the Institute of General Chemistry)

SUBMITTED: June 17, 1958

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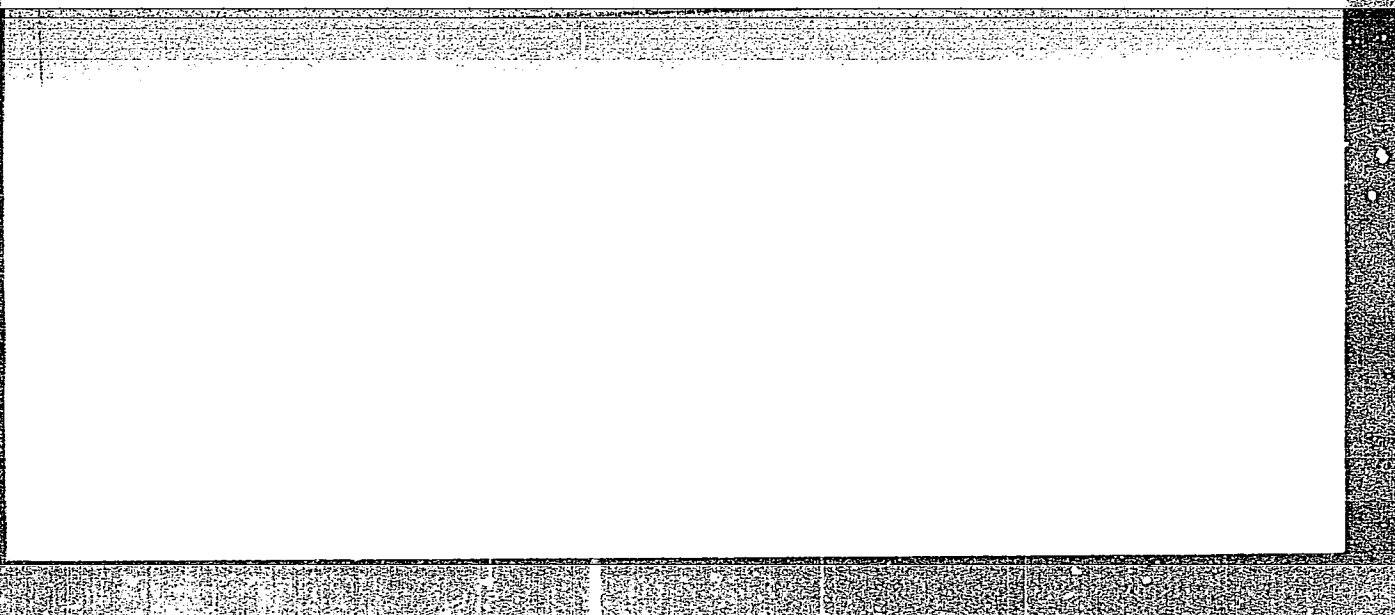
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A. Wielopolski

2

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001961730003-1



APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001961730003-1"

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H-31

Abs Jour : Ref Zhur - Khimiya, No 7, 1958, 23449  
Author : W. Wronski  
Inst :                       
Title : Quality Problem of Artificial Protein Fibers.  
Orig Pub : Przem. chem., 1957, 13, No 4, 199-204  
Abstract : Bibliography with 19 titles.

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Coagulation of polyacrylonitrile solutions. Tworzywa wielkocząst 6  
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S/081/62/000/024/020/052  
B117/B186

AUTHORS: Cytryk, Jerzy, Wroński, Włodzimierz

TITLE: Coagulation of polyacrylonitrile solutions

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24 (II), 1962, 833-834,  
abstract 24P95 (Polimery, tworzywa, wielkocząsteczkowe, v. 6,  
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TEXT: The coagulation of polyacrylonitrile from aqueous solution of dimethyl formamide was studied. The effects due to temperature and concentration of dimethyl formamide, and those due to concentration of polyacrylonitrile solution, on the transparency of films was determined. Photographs are given showing the microstructures of films obtained at concentrations of a dimethyl formamide solution between 30 and 70 % at 20°C and at 60 % at 15, 30, and 40°C. It was shown that a transparent gel without bubbles forms from the 40 - 60 % aqueous dimethyl formamide solution below 20°C and at a concentration of polymer (molecular weight 73 000)  $\geq$  20 %.  
[Abstracter's note: Complete translation.]

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High-power ferrite resonance insulators. Pt. 1. Przem. inst telekom  
prace 14 no.46:23-27 '64.

L L2019-65

P/2507/64/014/046/0023/0037

ACCESSION NR: AT5007776

AUTHOR: Foniok, F.; Wronski, Z. (Vron'ski, Z.)

TITLE: High-power ferrite resonance isolators. Part I. Design methods

SOURCE: Warsaw. Przemyslowy Instytut Telekomunikacji. Prace, v. 14, no. 46, 1964, 23-37

TOPIC TAGS: isolator design, ferrite isolator, resonance isolator, high power isolator, ferrite polarization, waveguide, dielectric loss, saturation magnetization

ABSTRACT: The article gives a comprehensive review of methods used in the design of high power ferrite resonance isolators consisting of ferrite and dielectric plates mounted in a waveguide. The most important design specifications are: reverse attenuation  $A_{\text{rev}}$ , forward attenuation  $A_{\text{for}}$ , and isolation  $I$ .



losses, the max  
power,  $P_{imp}$ , and upper and lower bounds  
Card 1/8

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ACCESSION NR: AT5007776

that magnetization and for its temperature variations are given. The methods for choosing  
the dielectric material are also discussed. Techniques for calculating the physical dimen-  
sions of the piezoelectric plates are discussed in detail. The thickness of the plates is  
determined by the required piezoelectric coefficient and the length of the plates.

tables.

Card 2/4

L 42019-65

ACCESSION NR: AT5007776

ASSOCIATION: Przemyslowy Instytut Telekomunikacji, Warsaw (Telecommunications Research Institute)

SUBMITTED: 26Oct63

ENCL: 01

SUB CODE: EC

NO REF SOV: 002

OTHER: 010

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Uncl.



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with Loeffler's synd. & meningitis (Pol))

(MENINGITIS, in infant and child,  
in ascariasis, with Loeffler's synd. (Pol))

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